WHAT IS CLAIMED IS:

1. Method for recognition of biometric data, in particular for recognition of characteristics of fingers and of faces of persons, wherein an object (1) is illuminated by a light source (3) and is acquired by optical scanning and numerical parameters are acquired by means of digital image processing, characterized in that the object (1) is acquired simultaneously from at least two different imaging directions and a three-dimensional model of the observed object (1) is calculated from at least two images and compared to a reference model acquired from also several images, wherein the object (1) is recognized to be right if the acquired data gained from the images are simultaneously in concordance with each other apart from predetermined tolerances respectively.

2. Method according to claim 1, characterized in that characteristic recognition attributes (m_F) of the dermal ridges of a reference object are acquired in a reference function R(z, y, m_F) and compared to a recognition function F(z, y, m_F) which describes characteristic recognition attributes (m_F) of the dermal ridges of the object (1) to be checked.

3. Method according to claim 1 or 2, characterized in that discrete geometric structure attributes are analyzed from at least one of the images.

4. Method according to claim 3, characterized in that, for description of a finger, entities are used which describe the geometric shape of the front phalanx of the finger.

5. Method according to claim 4, characterized in that the parameters length of the phalanx l_G, width of the phalanx b_G, l_N length of the nail, width of the nail b_N, projected area of the phalanx F_G, projected area of the nailbed F_N or coefficients deduced from these entities are used singly or in combination.

6. Method according to claim 4, characterized in that, for description of a face, a front image and a lateral image from which an ear is at least partially visible is used.

7. Method according to one of the preceding claims, characterized in that a light slit or raster is

projected onto the object (1) in way such that the projected slit forms a contour on the spatial surface of the object (1) whose image allows a statement about the three-dimensional shape of the object (1), wherein the illumination of the light slit or raster is carried out using light of a wavelength which is different from the wavelength used for illumination of the main image and that an image of the light raster or slit is selectively acquired by a camera due to the different light color and, by characterizing the contour of a partial area of the object (1), serves as an additional parameter for recognizing the concordance of the object (1) with the reference object.

8. Method according to one of the preceding claims, characterized in that an illumination path (B) coming laterally from a light source (Q) is directed onto the object and both a reflected portion (R) and a transmitted portion (T) are analyzed spectroscopically and/or scattered-light-spectroscopically.

9. Method according to one of the claims 7 or 8, characterized in that the analysis is carried out using light of the wavelengths 678 nm and about 808 nm to 835 nm.

10. Method according to one of the preceding claims, characterized in that, for an increase of the fraud resistance, the object is illuminated punctually using additional light sources in a visible and/or infrared spectral range at at least two locations and that the intensity of the light backdiffused from the object (1) is measured at these locations and compared to a reference value.

11. Method according claim 10, characterized in that first the place of maximal intensity is acquired for these points and a mean value is calculated from the value of at least two intensity centroids.

12. Method according to one of the preceding claims, characterized in that the object is multiply imaged for writing of a reference data set by skewing it stepwise around an axis running through the object and that two images are saved in several discrete situations respectively and are joined together to one or several three-dimensional models.

13. Method according to one of the preceding claims, characterized in that the light sources are switched in a pulse-coded manner and, synchronously, the analysis of the signals is performed by means of an image receiver array.

14. Apparatus for carrying out the method according to one of the claims 1 to 13, characterized in that the apparatus comprises at least one illumination facility which emits visible and/or infrared light as well as at least two light detectors (2) for taking two independent images.

15. Apparatus according to claim 14, characterized in that the light detectors (2) are arranged in at least one image receiver array.

16. Apparatus according to claim 14 or 15, characterized in that the camera comprises a CMOS array in which at least two areas are arranged for taking separated images and that a facility for optical merging of two images is arranged in front of the camera.

17. Apparatus according to one of the claims 14 to 16, characterized in that at least two light sources (3) are arranged in a pairwise or ring-shaped manner around the light detector (2), which illuminate the object (1) punctually and that the backscattered intensity distribution is acquired using the light detector (2).

18. Apparatus according to claim 17, characterized in that the intensity distribution scattered back from the object (1) is acquired simultaneously by several electronic cameras.

19. Apparatus according to claim 17, characterized in that the intensity distribution scattered back from the object (1) is acquired by an electronic camera, wherein several images are acquired by the camera from different directions of taking which are merged by beam-combining optical elements.

20. Apparatus according to one of the claims 17 to 19, characterized in that, for punctual illumination, the additional light sources (3) are arranged at the apparatus in form of an independent module.